Part-1-Data-Loading

December 21, 2021

1 Load Data

In this File we load the raw data and convert it into JSON format.

Whilst the data was said to be in JSON format, when running it through a JSON linter, we noticed that it was not proper JSON due to the use of single quotes instead of double quotes.

To remedy this, we explored options such as replacing the single quotes with double quotes. However this led to issues where the name of a game included an apostrophe, e.g. `Assassin's Creed`.

1.1 User-items data

The dataset was downloaded from https://cseweb.ucsd.edu/~jmcauley/datasets.html#steam_data file *Version 1: User and Item Data*.

```python
import pandas as pd
import numpy as np
import ast
import json
```

```python
with open("C:
 ↪\\Users\\pmogh\\Documents\\Python_Workspace\\Final_Project_Dataset\\ProjectData\\Part_1\\us
 ↪json",encoding="utf-8") as player_item_file:
    lines = player_item_file.readlines()[0:10000]
```

```python
lines[0]
```

```python
'{\'user_id\': \'76561197970982479\', \'items_count\': 277, \'steam_id\':
\'76561197970982479\', \'user_url\':
\'http://steamcommunity.com/profiles/76561197970982479\', \'items\':
[{\'item_id\': \'10\', \'item_name\': \'Counter-Strike\', \'playtime_forever\':
6, \'playtime_2weeks\': 0}, {\'item_id\': \'20\', \'item_name\': \'Team Fortress
Classic\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\':
\'30\', \'item_name\': \'Day of Defeat\', \'playtime_forever\': 7,
\'playtime_2weeks\': 0}, {\'item_id\': \'40\', \'item_name\': \'Deathmatch
Classic\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\':
\'50\', \'item_name\': \'Half-Life: Opposing Force\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'60\', \'item_name\': \'Ricochet\',
\'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'70\',
```

\'item_name\': \'Half-Life\', \'playtime_forever\': 0, \'playtime_2weeks\': 0},
{\'item_id\': \'130\', \'item_name\': \'Half-Life: Blue Shift\',
\'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'300\',
\'item_name\': \'Day of Defeat: Source\', \'playtime_forever\': 4733,
\'playtime_2weeks\': 0}, {\'item_id\': \'240\', \'item_name\': \'Counter-Strike:
Source\', \'playtime_forever\': 1853, \'playtime_2weeks\': 0}, {\'item_id\':
\'3830\', \'item_name\': \'Psychonauts\', \'playtime_forever\': 333,
\'playtime_2weeks\': 0}, {\'item_id\': \'2630\', \'item_name\': \'Call of Duty
2\', \'playtime_forever\': 75, \'playtime_2weeks\': 0}, {\'item_id\': \'3900\',
\'item_name\': "Sid Meier\'s Civilization IV", \'playtime_forever\': 338,
\'playtime_2weeks\': 0}, {\'item_id\': \'34440\', \'item_name\': "Sid Meier\'s
Civilization IV", \'playtime_forever\': 0, \'playtime_2weeks\': 0},
{\'item_id\': \'3920\', \'item_name\': "Sid Meier\'s Pirates!",
\'playtime_forever\': 2, \'playtime_2weeks\': 0}, {\'item_id\': \'6400\',
\'item_name\': \'Joint Task Force\', \'playtime_forever\': 286,
\'playtime_2weeks\': 0}, {\'item_id\': \'6910\', \'item_name\': \'Deus Ex: Game
of the Year Edition\', \'playtime_forever\': 2685, \'playtime_2weeks\': 0},
{\'item_id\': \'7670\', \'item_name\': \'BioShock\', \'playtime_forever\': 633,
\'playtime_2weeks\': 0}, {\'item_id\': \'409710\', \'item_name\': \'BioShock
Remastered\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\':
\'220\', \'item_name\': \'Half-Life 2\', \'playtime_forever\': 696,
\'playtime_2weeks\': 0}, {\'item_id\': \'320\', \'item_name\': \'Half-Life 2:
Deathmatch\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\':
\'340\', \'item_name\': \'Half-Life 2: Lost Coast\', \'playtime_forever\': 37,
\'playtime_2weeks\': 0}, {\'item_id\': \'360\', \'item_name\': \'Half-Life
Deathmatch: Source\', \'playtime_forever\': 0, \'playtime_2weeks\': 0},
{\'item_id\': \'380\', \'item_name\': \'Half-Life 2: Episode One\',
\'playtime_forever\': 168, \'playtime_2weeks\': 0}, {\'item_id\': \'400\',
\'item_name\': \'Portal\', \'playtime_forever\': 173, \'playtime_2weeks\': 0},
{\'item_id\': \'420\', \'item_name\': \'Half-Life 2: Episode Two\',
\'playtime_forever\': 323, \'playtime_2weeks\': 0}, {\'item_id\': \'9340\',
\'item_name\': \'Company of Heroes: Opposing Fronts\', \'playtime_forever\':
692, \'playtime_2weeks\': 0}, {\'item_id\': \'228200\', \'item_name\': \'Company
of Heroes (New Steam Version)\', \'playtime_forever\': 0, \'playtime_2weeks\':
0}, {\'item_id\': \'11450\', \'item_name\': \'Overlord\', \'playtime_forever\':
0, \'playtime_2weeks\': 0}, {\'item_id\': \'7940\', \'item_name\': \'Call of
Duty 4: Modern Warfare\', \'playtime_forever\': 1185, \'playtime_2weeks\': 0},
{\'item_id\': \'4700\', \'item_name\': \'Medieval II: Total War\',
\'playtime_forever\': 477, \'playtime_2weeks\': 0}, {\'item_id\': \'12900\',
\'item_name\': \'Audiosurf\', \'playtime_forever\': 115, \'playtime_2weeks\':
0}, {\'item_id\': \'13250\', \'item_name\': \'Unreal Gold\',
\'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'16100\',
\'item_name\': \'Virtual Villagers: A New Home\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'15700\', \'item_name\': "Oddworld:
Abe\'s Oddysee", \'playtime_forever\': 28, \'playtime_2weeks\': 0},
{\'item_id\': \'15710\', \'item_name\': "Oddworld: Abe\'s Exoddus",
\'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'17330\',

\'item_name\': \'Crysis Warhead\', \'playtime_forever\': 31, \'playtime_2weeks\': 0}, {\'item_id\': \'17340\', \'item_name\': \'Crysis Wars\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'22000\', \'item_name\': \'World of Goo\', \'playtime_forever\': 195, \'playtime_2weeks\': 0}, {\'item_id\': \'500\', \'item_name\': \'Left 4 Dead\', \'playtime_forever\': 513, \'playtime_2weeks\': 0}, {\'item_id\': \'4560\', \'item_name\': \'Company of Heroes\', \'playtime_forever\': 1061, \'playtime_2weeks\': 0}, {\'item_id\': \'17460\', \'item_name\': \'Mass Effect\', \'playtime_forever\': 1613, \'playtime_2weeks\': 0}, {\'item_id\': \'10500\', \'item_name\': \'Empire: Total War\', \'playtime_forever\': 186, \'playtime_2weeks\': 0}, {\'item_id\': \'24740\', \'item_name\': \'Burnout Paradise: The Ultimate Box\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'22200\', \'item_name\': \'Zeno Clash\', \'playtime_forever\': 271, \'playtime_2weeks\': 0}, {\'item_id\': \'26800\', \'item_name\': \'Braid\', \'playtime_forever\': 445, \'playtime_2weeks\': 0}, {\'item_id\': \'1250\', \'item_name\': \'Killing Floor\', \'playtime_forever\': 10006, \'playtime_2weeks\': 0}, {\'item_id\': \'35420\', \'item_name\': \'Killing Floor Mod: Defence Alliance 2\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'3590\', \'item_name\': \'Plants vs. Zombies: Game of the Year\', \'playtime_forever\': 4413, \'playtime_2weeks\': 0}, {\'item_id\': \'8880\', \'item_name\': \'Freedom Force\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'8890\', \'item_name\': \'Freedom Force vs. the 3rd Reich\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'23120\', \'item_name\': \'Droplitz\', \'playtime_forever\': 53, \'playtime_2weeks\': 0}, {\'item_id\': \'35700\', \'item_name\': \'Trine\', \'playtime_forever\': 199, \'playtime_2weeks\': 0}, {\'item_id\': \'10140\', \'item_name\': \'3D Ultra Minigolf Adventures Deluxe\', \'playtime_forever\': 25, \'playtime_2weeks\': 0}, {\'item_id\': \'35010\', \'item_name\': \'Batman: Arkham Asylum\', \'playtime_forever\': 570, \'playtime_2weeks\': 0}, {\'item_id\': \'35140\', \'item_name\': \'Batman: Arkham Asylum GOTY Edition\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'29180\', \'item_name\': \'Osmos\', \'playtime_forever\': 940, \'playtime_2weeks\': 0}, {\'item_id\': \'15520\', \'item_name\': \'AaAaAA!!! - A Reckless Disregard for Gravity\', \'playtime_forever\': 110, \'playtime_2weeks\': 0}, {\'item_id\': \'32370\', \'item_name\': \'STAR WARS : Knights of the Old Republic \', \'playtime_forever\': 5, \'playtime_2weeks\': 0}, {\'item_id\': \'37700\', \'item_name\': \'Darkest of Days\', \'playtime_forever\': 782, \'playtime_2weeks\': 0}, {\'item_id\': \'6020\', \'item_name\': \'STAR WARS Jedi Knight: Jedi Academy \', \'playtime_forever\': 77, \'playtime_2weeks\': 0}, {\'item_id\': \'24860\', \'item_name\': \'Battlefield 2\', \'playtime_forever\': 437, \'playtime_2weeks\': 0}, {\'item_id\': \'39530\', \'item_name\': \'Painkiller: Black Edition\', \'playtime_forever\': 503, \'playtime_2weeks\': 0}, {\'item_id\': \'550\', \'item_name\': \'Left 4 Dead 2\', \'playtime_forever\': 1474, \'playtime_2weeks\': 0}, {\'item_id\': \'223530\', \'item_name\': \'Left 4 Dead 2 Beta\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'8980\', \'item_name\': \'Borderlands\', \'playtime_forever\': 3061, \'playtime_2weeks\': 0}, {\'item_id\': \'41500\',

\'item_name\': \'Torchlight\', \'playtime_forever\': 536, \'playtime_2weeks\':
0}, {\'item_id\': \'20900\', \'item_name\': \'The Witcher: Enhanced Edition\',
\'playtime_forever\': 139, \'playtime_2weeks\': 0}, {\'item_id\': \'10180\',
\'item_name\': \'Call of Duty: Modern Warfare 2\', \'playtime_forever\': 1886,
\'playtime_2weeks\': 0}, {\'item_id\': \'10190\', \'item_name\': \'Call of Duty:
Modern Warfare 2 - Multiplayer\', \'playtime_forever\': 1784,
\'playtime_2weeks\': 0}, {\'item_id\': \'17450\', \'item_name\': \'Dragon Age:
Origins\', \'playtime_forever\': 4431, \'playtime_2weeks\': 0}, {\'item_id\':
\'3170\', \'item_name\': "King\'s Bounty: Armored Princess",
\'playtime_forever\': 1021, \'playtime_2weeks\': 0}, {\'item_id\': \'25900\',
\'item_name\': "King\'s Bounty: The Legend", \'playtime_forever\': 1389,
\'playtime_2weeks\': 0}, {\'item_id\': \'31410\', \'item_name\': \'Zombie
Driver\', \'playtime_forever\': 95, \'playtime_2weeks\': 0}, {\'item_id\':
\'24980\', \'item_name\': \'Mass Effect 2\', \'playtime_forever\': 5001,
\'playtime_2weeks\': 0}, {\'item_id\': \'8850\', \'item_name\': \'BioShock 2\',
\'playtime_forever\': 1504, \'playtime_2weeks\': 0}, {\'item_id\': \'409720\',
\'item_name\': \'BioShock 2 Remastered\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'46000\', \'item_name\': \'Bob Came in
Pieces\', \'playtime_forever\': 11, \'playtime_2weeks\': 0}, {\'item_id\':
\'33230\', \'item_name\': "Assassin\'s Creed II", \'playtime_forever\': 1636,
\'playtime_2weeks\': 0}, {\'item_id\': \'20820\', \'item_name\': \'Shatter\',
\'playtime_forever\': 46, \'playtime_2weeks\': 0}, {\'item_id\': \'47700\',
\'item_name\': \'Command and Conquer 4: Tiberian Twilight\',
\'playtime_forever\': 85, \'playtime_2weeks\': 0}, {\'item_id\': \'24960\',
\'item_name\': \'Battlefield: Bad Company 2\', \'playtime_forever\': 5716,
\'playtime_2weeks\': 0}, {\'item_id\': \'43110\', \'item_name\': \'Metro 2033\',
\'playtime_forever\': 834, \'playtime_2weeks\': 0}, {\'item_id\': \'8190\',
\'item_name\': \'Just Cause 2\', \'playtime_forever\': 3083,
\'playtime_2weeks\': 0}, {\'item_id\': \'49600\', \'item_name\': \'Beat
Hazard\', \'playtime_forever\': 127, \'playtime_2weeks\': 0}, {\'item_id\':
\'31220\', \'item_name\': \'Sam & Max 301: The Penal Zone\',
\'playtime_forever\': 71, \'playtime_2weeks\': 0}, {\'item_id\': \'31230\',
\'item_name\': \'Sam & Max 302: The Tomb of Sammun-Mak\', \'playtime_forever\':
0, \'playtime_2weeks\': 0}, {\'item_id\': \'31240\', \'item_name\': "Sam & Max
303: They Stole Max\'s Brain!", \'playtime_forever\': 0, \'playtime_2weeks\':
0}, {\'item_id\': \'31250\', \'item_name\': \'Sam & Max 304: Beyond the Alley of
the Dolls\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\':
\'31260\', \'item_name\': \'Sam & Max 305: The City that Dares not Sleep\',
\'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'21090\',
\'item_name\': \'F.E.A.R.\', \'playtime_forever\': 585, \'playtime_2weeks\': 0},
{\'item_id\': \'21110\', \'item_name\': \'F.E.A.R.: Extraction Point\',
\'playtime_forever\': 146, \'playtime_2weeks\': 0}, {\'item_id\': \'21120\',
\'item_name\': \'F.E.A.R.: Perseus Mandate\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'49400\', \'item_name\': \'Magic: The
Gathering - Duels of the Planeswalkers\', \'playtime_forever\': 32,
\'playtime_2weeks\': 0}, {\'item_id\': \'33910\', \'item_name\': \'Arma 2\',
\'playtime_forever\': 3, \'playtime_2weeks\': 0}, {\'item_id\': \'33930\',

\'item_name\': \'Arma 2: Operation Arrowhead\', \'playtime_forever\': 3, \'playtime_2weeks\': 0}, {\'item_id\': \'219540\', \'item_name\': \'Arma 2: Operation Arrowhead Beta (Obsolete)\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'17410\', \'item_name\': "Mirror\'s Edge", \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'205790\', \'item_name\': \'Dota 2 Test\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'50130\', \'item_name\': \'Mafia II\', \'playtime_forever\': 707, \'playtime_2weeks\': 0}, {\'item_id\': \'62100\', \'item_name\': \'Chime\', \'playtime_forever\': 50, \'playtime_2weeks\': 0}, {\'item_id\': \'31280\', \'item_name\': \'Poker Night at the Inventory\', \'playtime_forever\': 206, \'playtime_2weeks\': 0}, {\'item_id\': \'57300\', \'item_name\': \'Amnesia: The Dark Descent\', \'playtime_forever\': 12, \'playtime_2weeks\': 0}, {\'item_id\': \'21970\', \'item_name\': \'R.U.S.E\', \'playtime_forever\': 64, \'playtime_2weeks\': 0}, {\'item_id\': \'8930\', \'item_name\': "Sid Meier\'s Civilization V", \'playtime_forever\': 10345, \'playtime_2weeks\': 0}, {\'item_id\': \'41000\', \'item_name\': \'Serious Sam HD: The First Encounter\', \'playtime_forever\': 369, \'playtime_2weeks\': 0}, {\'item_id\': \'41050\', \'item_name\': \'Serious Sam Classic: The First Encounter\', \'playtime_forever\': 76, \'playtime_2weeks\': 0}, {\'item_id\': \'41060\', \'item_name\': \'Serious Sam Classic: The Second Encounter\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'227780\', \'item_name\': \'Serious Sam Classics: Revolution\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'18040\', \'item_name\': \'DeathSpank\', \'playtime_forever\': 594, \'playtime_2weeks\': 0}, {\'item_id\': \'22380\', \'item_name\': \'Fallout: New Vegas\', \'playtime_forever\': 43, \'playtime_2weeks\': 0}, {\'item_id\': \'42700\', \'item_name\': \'Call of Duty: Black Ops\', \'playtime_forever\': 966, \'playtime_2weeks\': 0}, {\'item_id\': \'42710\', \'item_name\': \'Call of Duty: Black Ops - Multiplayer\', \'playtime_forever\': 2452, \'playtime_2weeks\': 0}, {\'item_id\': \'62000\', \'item_name\': \'Flight Control HD\', \'playtime_forever\': 25, \'playtime_2weeks\': 0}, {\'item_id\': \'40800\', \'item_name\': \'Super Meat Boy\', \'playtime_forever\': 119, \'playtime_2weeks\': 0}, {\'item_id\': \'9500\', \'item_name\': \'Gish\', \'playtime_forever\': 6, \'playtime_2weeks\': 0}, {\'item_id\': \'18700\', \'item_name\': \'And Yet It Moves\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'31270\', \'item_name\': \'Puzzle Agent\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'58200\', \'item_name\': \'Jolly Rover\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'70400\', \'item_name\': "Recettear: An Item Shop\'s Tale", \'playtime_forever\': 537, \'playtime_2weeks\': 0}, {\'item_id\': \'41300\', \'item_name\': \'Altitude\', \'playtime_forever\': 50, \'playtime_2weeks\': 0}, {\'item_id\': \'41800\', \'item_name\': \'Gratuitous Space Battles\', \'playtime_forever\': 149, \'playtime_2weeks\': 0}, {\'item_id\': \'42500\', \'item_name\': \'DogFighter\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'49900\', \'item_name\': \'Plain Sight\', \'playtime_forever\': 23, \'playtime_2weeks\': 0}, {\'item_id\': \'55000\', \'item_name\': \'Flotilla\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'34330\', \'item_name\': \'Total War:

SHOGUN 2\', \'playtime_forever\': 1538, \'playtime_2weeks\': 0}, {\'item_id\':
\'63200\', \'item_name\': \'Monday Night Combat\', \'playtime_forever\': 573,
\'playtime_2weeks\': 0}, {\'item_id\': \'99810\', \'item_name\':
\'Bulletstorm\', \'playtime_forever\': 2, \'playtime_2weeks\': 0}, {\'item_id\':
\'620\', \'item_name\': \'Portal 2\', \'playtime_forever\': 887,
\'playtime_2weeks\': 0}, {\'item_id\': \'42910\', \'item_name\': \'Magicka\',
\'playtime_forever\': 588, \'playtime_2weeks\': 0}, {\'item_id\': \'15500\',
\'item_name\': \'The Wonderful End of the World\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'15540\', \'item_name\': \'1… 2…
3… KICK IT! (Drop That Beat Like an Ugly Baby)\', \'playtime_forever\': 4,
\'playtime_2weeks\': 0}, {\'item_id\': \'18500\', \'item_name\': \'Defense Grid:
The Awakening\', \'playtime_forever\': 126, \'playtime_2weeks\': 0},
{\'item_id\': \'26500\', \'item_name\': \'Cogs\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'35460\', \'item_name\': \'The Ball\',
\'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'38700\',
\'item_name\': \'Toki Tori\', \'playtime_forever\': 0, \'playtime_2weeks\': 0},
{\'item_id\': \'38720\', \'item_name\': \'RUSH\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'63700\', \'item_name\': \'BIT.TRIP
BEAT\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\': \'280\',
\'item_name\': \'Half-Life: Source\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'20920\', \'item_name\': \'The Witcher
2: Assassins of Kings Enhanced Edition\', \'playtime_forever\': 1343,
\'playtime_2weeks\': 0}, {\'item_id\': \'105600\', \'item_name\': \'Terraria\',
\'playtime_forever\': 772, \'playtime_2weeks\': 0}, {\'item_id\': \'98200\',
\'item_name\': \'Frozen Synapse\', \'playtime_forever\': 9, \'playtime_2weeks\':
0}, {\'item_id\': \'4500\', \'item_name\': \'S.T.A.L.K.E.R.: Shadow of
Chernobyl\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\':
\'4540\', \'item_name\': \'Titan Quest\', \'playtime_forever\': 3,
\'playtime_2weeks\': 0}, {\'item_id\': \'4550\', \'item_name\': \'Titan Quest:
Immortal Throne\', \'playtime_forever\': 76, \'playtime_2weeks\': 0},
{\'item_id\': \'9480\', \'item_name\': \'Saints Row 2\', \'playtime_forever\':
0, \'playtime_2weeks\': 0}, {\'item_id\': \'15620\', \'item_name\': \'Warhammer®
40,000 : Dawn of War® II\', \'playtime_forever\': 2085, \'playtime_2weeks\': 0},
{\'item_id\': \'20500\', \'item_name\': \'Red Faction: Guerrilla Steam
Edition\', \'playtime_forever\': 0, \'playtime_2weeks\': 0}, {\'item_id\':
\'20570\', \'item_name\': \'Warhammer® 40,000 : Dawn of War® II – Chaos
Rising \', \'playtime_forever\': 69, \'playtime_2weeks\': 0}, {\'item_id\':
\'50620\', \'item_name\': \'Darksiders\', \'playtime_forever\': 101,
\'playtime_2weeks\': 0}, {\'item_id\': \'55100\', \'item_name\': \'Homefront\',
\'playtime_forever\': 51, \'playtime_2weeks\': 0}, {\'item_id\': \'55140\',
\'item_name\': \'MX vs. ATV Reflex\', \'playtime_forever\': 0,
\'playtime_2weeks\': 0}, {\'item_id\': \'56400\', \'item_name\': \'Warhammer®
40,000 : Dawn of War® II – Retribution \', \'playtime_forever\': 678,
\'playtime_2weeks\': 0}, {\'item_id\': \'475150\', \'item_name\': \'Titan Quest
Anniversary Edition\', \'playtime_forever\': 0, \'playtime_2weeks\': 0},
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{'item_id': '260230',
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{'item_id': '334120',
 'item_name': 'Armikrog',
 'playtime_forever': 109,
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{'item_id': '257510',
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 'item_name': 'Killing Floor 2 - SDK',
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{'item_id': '377160',
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 'playtime_forever': 2001,
 'playtime_2weeks': 0},
{'item_id': '340170',
 'item_name': 'FINAL FANTASY TYPE-0 HD',
 'playtime_forever': 170,

```
 'playtime_2weeks': 0},
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 'item_name': 'Undertale',
 'playtime_forever': 395,
 'playtime_2weeks': 0},
{'item_id': '396660',
 'item_name': 'Tahira: Echoes of the Astral Empire',
 'playtime_forever': 0,
 'playtime_2weeks': 0},
{'item_id': '337000',
 'item_name': 'Deus Ex: Mankind Divided ',
 'playtime_forever': 1159,
 'playtime_2weeks': 0},
{'item_id': '368230',
 'item_name': 'Kingdom: Classic',
 'playtime_forever': 83,
 'playtime_2weeks': 0},
{'item_id': '496300',
 'item_name': 'Kingdom: New Lands',
 'playtime_forever': 0,
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{'item_id': '231430',
 'item_name': 'Company of Heroes 2',
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{'item_id': '289130',
 'item_name': 'Endless Legend',
 'playtime_forever': 593,
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{'item_id': '268500',
 'item_name': 'XCOM 2',
 'playtime_forever': 1495,
 'playtime_2weeks': 0},
{'item_id': '461640',
 'item_name': 'Sins Of The Demon RPG',
 'playtime_forever': 0,
 'playtime_2weeks': 0},
{'item_id': '379720',
 'item_name': 'DOOM',
 'playtime_forever': 793,
 'playtime_2weeks': 0},
{'item_id': '273350',
 'item_name': 'Evolve Stage 2',
 'playtime_forever': 58,
 'playtime_2weeks': 0}]}
```

```python
# Merger Line with comma & Build List
merge_data = '[' + ','.join(lines) + ']'
```

```python
data_linter = ast.literal_eval(merge_data)
```

```python
# Export to JSON

with open('data.json', 'w') as j_file:
    json.dump(data_linter, j_file)
```

We now have a `.json` file that we can easily view as a Pandas DataFrame.

```python
data_frame = pd.DataFrame(data_linter)
data_frame.head()
```

```
            user_id  items_count            steam_id  \
0  76561197970982479          277  76561197970982479
1            js41637          888  76561198035864385
2           evcentric          137  76561198007712555
3         Riot-Punch          328  76561197963445855
4               doctr          541  76561198002099482


                                          user_url  \
0  http://steamcommunity.com/profiles/76561197970…
1              http://steamcommunity.com/id/js41637
2           http://steamcommunity.com/id/evcentric
3          http://steamcommunity.com/id/Riot-Punch
4               http://steamcommunity.com/id/doctr


                                            items
0  [{'item_id': '10', 'item_name': 'Counter-Strik…
1  [{'item_id': '10', 'item_name': 'Counter-Strik…
2  [{'item_id': '1200', 'item_name': 'Red Orchest…
3  [{'item_id': '10', 'item_name': 'Counter-Strik…
4  [{'item_id': '300', 'item_name': 'Day of Defea…
```

1.2 Items detail data

This dataset was downloaded from https://cseweb.ucsd.edu/~jmcauley/datasets.html#steam_data file *Version 2: item metadata*

```python
# Load data

with open("C:
 ↪\\Users\\pmogh\\Documents\\Python_Workspace\\Final_Project_Dataset\\ProjectData\\Part_2\\st
 ↪json",encoding="utf-8") as game_details:
    data_game = game_details.readlines()
```

```
[ ]: # View first line
     data_game[0]
```

```
[ ]: "{u'publisher': u'Kotoshiro', u'genres': [u'Action', u'Casual', u'Indie',
     u'Simulation', u'Strategy'], u'app_name': u'Lost Summoner Kitty', u'title':
     u'Lost Summoner Kitty', u'url':
     u'http://store.steampowered.com/app/761140/Lost_Summoner_Kitty/',
     u'release_date': u'2018-01-04', u'tags': [u'Strategy', u'Action', u'Indie',
     u'Casual', u'Simulation'], u'discount_price': 4.49, u'reviews_url':
     u'http://steamcommunity.com/app/761140/reviews/?browsefilter=mostrecent&p=1',
     u'specs': [u'Single-player'], u'price': 4.99, u'early_access': False, u'id':
     u'761140', u'developer': u'Kotoshiro'}\n"
```

```
[ ]: # Get number of lines
     len(data_game)
```

```
[ ]: 32135
```

There are 32135 lines, each representing a different game.

```
[ ]: # evaluate the first string
     data_linter = ast.literal_eval(data_game[0])
```

```
[ ]: # View the first line
     data_linter
```

```
[ ]: {'publisher': 'Kotoshiro',
      'genres': ['Action', 'Casual', 'Indie', 'Simulation', 'Strategy'],
      'app_name': 'Lost Summoner Kitty',
      'title': 'Lost Summoner Kitty',
      'url': 'http://store.steampowered.com/app/761140/Lost_Summoner_Kitty/',
      'release_date': '2018-01-04',
      'tags': ['Strategy', 'Action', 'Indie', 'Casual', 'Simulation'],
      'discount_price': 4.49,
      'reviews_url':
     'http://steamcommunity.com/app/761140/reviews/?browsefilter=mostrecent&p=1',
      'specs': ['Single-player'],
      'price': 4.99,
      'early_access': False,
      'id': '761140',
      'developer': 'Kotoshiro'}
```

```
[ ]: merge_data = '[' + ','.join(data_game) + ']'
```

```
[ ]: data_linter = ast.literal_eval(merge_data)
```

```
[ ]: with open('gamesdata.json', 'w') as game_data:
         json.dump(data_linter, game_data)
```

We now have a `.json` file that we can easily view as a Pandas DataFrame.

```
[ ]: data_frame = pd.DataFrame(data_linter)
     data_frame.head()
```

```
[ ]:            publisher                                          genres  \
     0          Kotoshiro        [Action, Casual, Indie, Simulation, Strategy]
     1  Making Fun, Inc.                 [Free to Play, Indie, RPG, Strategy]
     2      Poolians.com   [Casual, Free to Play, Indie, Simulation, Sports]
     3                                        [Action, Adventure, Casual]
     4                NaN                                              NaN


                       app_name                    title  \
     0        Lost Summoner Kitty       Lost Summoner Kitty
     1                 Ironbound                 Ironbound
     2   Real Pool 3D - Poolians   Real Pool 3D - Poolians
     3                      2222                      2222
     4             Log Challenge                       NaN


                                              url release_date  \
     0  http://store.steampowered.com/app/761140/Lost_…   2018-01-04
     1  http://store.steampowered.com/app/643980/Ironb…   2018-01-04
     2  http://store.steampowered.com/app/670290/Real_…   2017-07-24
     3     http://store.steampowered.com/app/767400/2222/    2017-12-07
     4  http://store.steampowered.com/app/773570/Log_C…          NaN


                                             tags  discount_price  \
     0      [Strategy, Action, Indie, Casual, Simulation]            4.49
     1  [Free to Play, Strategy, Indie, RPG, Card Game…             NaN
     2  [Free to Play, Simulation, Sports, Casual, Ind…             NaN
     3                    [Action, Adventure, Casual]            0.83
     4              [Action, Indie, Casual, Sports]            1.79


                                      reviews_url  \
     0  http://steamcommunity.com/app/761140/reviews/?…
     1  http://steamcommunity.com/app/643980/reviews/?…
     2  http://steamcommunity.com/app/670290/reviews/?…
     3  http://steamcommunity.com/app/767400/reviews/?…
     4  http://steamcommunity.com/app/773570/reviews/?…


                                             specs          price  \
     0                               [Single-player]           4.99
     1   [Single-player, Multi-player, Online Multi-Pla…  Free To Play
     2   [Single-player, Multi-player, Online Multi-Pla…  Free to Play
     3                               [Single-player]           0.99
     4   [Single-player, Full controller support, HTC V…          2.99
```

```
   early_access      id         developer        sentiment metascore
0         False  761140          Kotoshiro              NaN       NaN
1         False  643980  Secret Level SRL  Mostly Positive       NaN
2         False  670290     Poolians.com  Mostly Positive       NaN
3         False  767400                              NaN       NaN
4         False  773570              NaN              NaN       NaN
```